

FOR OFFICIAL USE

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C

**0560/403**

	KU	PS
Total Marks		

NATIONAL WEDNESDAY, 2 MAY  
 QUALIFICATIONS 10.35 AM – 12.20 PM  
 2007

COMPUTING STUDIES  
 STANDARD GRADE  
 Credit Level

Fill in these boxes and read what is printed below.

Full name of centre

Town

Forename(s)

Surname

Date of birth

Day Month Year

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Scottish candidate number

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Number of seat

Read each question carefully.

Attempt **all** questions.

Write your answers in the space provided on the question paper.

Write as neatly as possible.

Answer in sentences wherever possible.

Before leaving the examination room you must give this book to the invigilator. If you do not, you may lose all the marks for this paper.





KU	PS
2	
1	
0	
1	
0	
1	
0	
1	
0	

1. (continued)

(b) Access to the Internet is provided by an Internet Service Provider (ISP).

State **two** facilities that the ISP may offer to Glencoe House.

1 \_\_\_\_\_  
\_\_\_\_\_

2 \_\_\_\_\_  
\_\_\_\_\_

(c) When potential clients contact Glencoe House, the response sometimes includes an *attachment* saved as a *standard file format*.

(i) What is an attachment?

\_\_\_\_\_  
\_\_\_\_\_

(ii) Name **one** standard file format

\_\_\_\_\_

(iii) Describe **one** advantage of using standard file formats.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

[Turn over

KU	PS
2	
1	
0	
1	
0	
2	
1	
0	

2. When clients make a booking, Mirrah, the centre’s secretary, enters their details in a database.

(a) Mirrah has poor eyesight. State **two** ways in which her computer’s *HCI* could be customised to enable her to carry out this task effectively.

1 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

2 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Part of the database design is shown below.

<i>Field Name</i>	<i>Type</i>	<i>Size</i>	<i>Validation</i>	<i>Sample Record</i>
Client Code	Number	4	>0 and <9999	1342
Surname	Text	20		Astley
Firstname	Text	20		Mike
Address	Text	30		34 Brampton Rd
Town	Text	20		Barnsley
Postcode	Text	8		YK3 7HJ
Sex	Text	6		Male
Date of Birth	Date	6		03/11/78
Course Name	Text	20		Orienteering

(b) A *validation* check is shown. Name the type of validation used.

\_\_\_\_\_

(c) Describe the difference between *validation* and *verification*.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

KU	PS
	2 1 0
	4 3 2 1 0
	1 0
	2 1 0
	1 0

2. (continued)

(d) The centre's database currently holds information concerning 15,000 clients.

Calculate how many **bytes** will be required to store **all** records. (Show your working.)

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(e) Mirrah wants to produce a paper copy of all females who have booked the mountain biking course.

(i) Describe how this could be done.

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(ii) In this example, is Mirrah a *data subject*, *data controller* or *data user*?

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(iii) Describe **two** rights that a data subject has with the *Data Protection Act*.

1 

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2 

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(f) Many databases make use of *computed fields*. What is a computed field?

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[Turn over

KU	PS
	2
	1
	0
	2
	1
	0
	1
	0

3. Derek Summers is a programmer.

(a) Derek's programs have to be translated into *machine code* before processing can take place. This can be done using either an *interpreter* or *compiler*.

Which type of translator would Derek use in the following situations? Explain why.

(i) While developing the program: \_\_\_\_\_

Reason \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(ii) When the program is finished: \_\_\_\_\_

Reason \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(b) Derek always tries to make sure his software is *portable*. Explain why he does this.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

KU	PS
1	
0	
	1
	0
	1
	0
	2
	1
	0

3. (continued)

(c) Most of Derek's software is *commercial*. Some of it is *shareware*.

(i) What is shareware?

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(ii) Why do you think Derek distributes his work as shareware?

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(d) Some of Derek's customers download his software, while others receive their copies by post.

State **one** reason why Derek may prefer his customers to download his software.

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(e) All of Derek's software includes *on-line help* and *on-line tutorial* facilities.

Which of these facilities should new customers use when they first receive the software? State **one** reason for your answer.

Facility \_\_\_\_\_

Reason \_\_\_\_\_

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[Turn over





KU	PS

5. Before heading out on his first sea kayaking activity, Derek uses a *virtual reality simulation* to practise the techniques.



- (a) Apart from practising new techniques, suggest **two** other reasons why simulators are used by learners.

1 \_\_\_\_\_

\_\_\_\_\_

2 \_\_\_\_\_

\_\_\_\_\_

2  
1  
0

- (b) When he uses the kayak simulator, sensors on the paddle detect the direction of movement and force used. This information is processed and a large *TFT* monitor displays the results of Derek's efforts.

- (i) What type of converter will be needed **before processing** of the information can take place? Tick (✓) **one** box only.

D to A converter

A to D converter

1  
0







KU	PS
	1 0
1 0	
	1 0
	1 0

7. (continued)

(d) The client bookings database is a *multi-user* database. It is password protected in an attempt to prevent unauthorised access and hacking.

(i) What piece of legislation makes this activity an offence?

\_\_\_\_\_

(ii) What other activity is outlawed in this legislation?

\_\_\_\_\_

(iii) What type of access would be suitable in this situation – *random* or *sequential*?

Type of access \_\_\_\_\_

Explain your answer \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

[END OF QUESTION PAPER]